

September 07, 2018



U.S. Department  
of Transportation

East Building, PHH-30  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 20692

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATION:
  - a. This special permit authorizes the transportation in commerce of low production lithium ion batteries contained in equipment (spacecraft). This special permit provides no relief from the Hazardous Materials Regulations (HMR) or the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI) the other than as specifically stated herein. The most recent revision supersedes all previous revisions.
  - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
  - c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
  - d. This special permit serves as an "exemption" as defined in 1;3.1.1 of the ICAO TI and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180 and the ICAO TI.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.185(a)(1) and 2;9.3.1 a) of the ICAO TI in that each lithium battery must be of the type proven to meet the criteria in Part III, subsection 38.3 of the UN Manual of Tests and Criteria, except as specified herein.

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5. BASIS: This special permit is based on the application of Tyvak Nano-Satellite Systems Inc. dated June 26, 2018 submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

<b>Hazardous Materials Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/ Division</b>	<b>Identi- fication Number</b>	<b>Packing Group</b>
Lithium ion batteries contained in equipment <i>including lithium ion polymer batteries*</i>	9	UN3481	N/A

\*Only low production lithium ion batteries contained in equipment (spacecraft) ("Low production" is defined as a production run of no more than 100 cells or batteries annually of a particular type) may be offered for transportation and transported under the terms of this special permit.

7. SAFETY CONTROL MEASURES:

a. Safety Controls:

(1) The low production lithium ion batteries of types electrically connected in two separate configurations each contained in equipment with the number of cells as described in the application on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD) may be offered for transportation under the terms of this special permit. Each different battery type must comply with all the conditions of this special permit prior to being offered for transportation.

(2) The battery contained in equipment must be equipped with an effective means of preventing dangerous reverse current flow if batteries or cells are connected in parallel.

(3) Cells and batteries contained in equipment must be protected against short circuiting.

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b. Testing Requirements:

(1) All lithium ion batteries contained in equipment must be comprised of lithium ion cells of a type that has passed all required tests as specified in the UN Manual of Tests and Criteria.

(2) The batteries contained in equipment need not be of a type that has passed the tests as specified in the UN Manual of Tests and Criteria.

c. Packaging: Prescribed packaging is as follows:

(1) All lithium ion batteries contained in equipment must have a strong impact-resistant outer casing, and be securely encased in and attached to the rigid satellite structure.

(2) Outer Packaging: Each spacecraft must be packaged in a non-specification solid plastic box reinforced with metal.

(3) The number and the net weight of the batteries in each package may not exceed those specified in the application on file with the OMHSAPD.

d. MARKING: The outer packaging containing the spacecraft must be marked on two sides in letters at least 2 inches high on a contrasting background with "DOT-SP 20692".

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit, the HMR and the ICAO TI.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

c. This special permit in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent

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authorities of the States of origin, transit, over flight, and destination of the consignment, as well as the State of the air operator.

d. For each cell and battery type, the grantee must maintain the following record and upon request and make this record available to DOT representatives or enforcement officials. The record to be maintained is as follows:

(1) A description of each cell and battery type and types of tests conducted and test results prior to offering for transportation.

(2) Dates and description of each shipment, to include number of cells and batteries.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and cargo-only aircraft.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
  - o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
  - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
  - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

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No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover  
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at [http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm). Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Steve H